



INVADE 80™

PREMIUM-LOW FOAM, NONIONIC SPREADER-ACTIVATOR

ACTIVE INGREDIENTS:

Alkyl Aryl Polyoxyethylene Ether, Free Fatty Acids	
and Isopropanol	80 %
Constituents ineffective as a spray adjuvant	20 %
TOTAL	100%

All ingredients are exempt from tolerance requirements under 40 CFR 180.

KEEP OUT OF REACH OF CHILDREN WARNING

Harmful if swallowed. If taken internally, DO NOT induce vomiting, call a physician at once. Avoid breathing spray mist. In case of contact with eyes, flush thoroughly with water and seek medical attention. Wash skin with soap and water.

FIRST AID

Call a poison control center or doctor immediately for treatment advice.

If Swallowed: Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

If on Skin or Clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes.

If Inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth to mouth if possible.

If in Eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses if present, after the first 5 minutes, then continue rinsing eye. Have the product container with you when calling a poison control center or doctor, or going for treatment.

GENERAL INFORMATION

FOR USE WITH INDUSTRIAL, FORESTRY, UTILITY, AQUATIC, ROADSIDE AND OTHER HERBICIDE PRODUCTS.

INVADE 80 is a highly concentrated low-foam, non-ionic spreader activator. **INVADE 80** increases the activity and effectiveness of insecticides, fungicides and herbicides by breaking down the waxy cuticle on the leaf surface and improves adhesion between the pesticide and the plant surface.

DIRECTIONS FOR USE

For use with acaricides, insecticides, fungicides, miticides, (Livestock sprays): Use 1/4 to 1/2 pint (4 to 8 fl. oz.) per 100 gallons of water.

For use with herbicides (aquatic & terrestrial), defoilants, dessicants: Use 1/2 to 4 pints per 100 gallons of water. In difficult wetting situations (such as hard water on mature waxy foliage) the higher rates may be required.

TYPE OF APPLICATION

PER 100 GALLON

Citrus, Turf	1 to 2 pints
Utility and Highway R.O.W.	1 to 4 pints
Forest Site Preparation	1 to 4 pints
Aquatic / Surface	1 to 4 pints
Aquatic / Submerged	1 to 4 pints
Insecticides, Fungicides, Miticides	1 to 2 pints

WARRANTY

Townsend warrants that this product, when used as directed, is reasonably fit for use as designated on this label. Townsend makes no warranty of fitness or merchantability. Townsend's maximum liability for breach of this warranty shall not exceed the purchase price of this product. In no event shall Townsend be liable for indirect or consequential damages. This warranty shall not be changed by oral or written agreement unless signed by a duly authorized officer of Townsend.



Manufactured For:

TOWNSEND CHEMICAL DIVISION
SELMA, INDIANA 47383

TOWNSEND CHEMICAL DIVISION

IN CASE OF EMERGENCY CALL
INFOTRAC: 1-800-535-5053

MATERIAL SAFETY DATA

1. PRODUCT IDENTIFICATION

TRADEMARK: **INVADE 80**
SYNONYMS: NONIONIC SURFACTANT
MOLECULAR FORMULA: PROPRIETARY BLEND

2. HAZARDOUS INGREDIENTS

OSHA REGULATED

COMPONENT	CAS. NO	WT%	EXPOSURE LIMITS
Ethanol, 2, 2-oxybis	111-46-6	-	Not Established
Isopropanol	67-63-0	-	PEL: 400 ppm/8 hrs.

Maximum of 1 ppm Ethylene Oxide (EO) (75-21-8) May be present in the product.
The OSHA PEL and ACGIH TLV for EO is 1 ppm.

3. EFFECTS OF OVEREXPOSURE:

EYE CONTACT: May cause eye irritation.
SKIN CONTACT: Prolonged contact may cause irritation to skin with local redness on skin.
INGESTION: May cause abdominal discomfort. Aspiration may occur during swallowing, resulting in lung damage.
INHALATION: Avoid breathing vapors or spray mist. Use respiratory protection device when handling.

4. EMERGENCY FIRST AID

Call a poison control center or doctor immediately for treatment advice.

IF SWALLOWED: Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes.

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth to mouth if possible.

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses if present, after the first 5 minutes, then continue rinsing eye. Have the product container with you when calling a poison control center or doctor, or going for treatment.

5. REACTIVITY DATA

STABILITY:	() unstable (x) stable
INCOMPATIBILITY (MATERIALS TO AVOID):	Strong oxidizing agents such as hydrogen peroxide, bromine, and chromic acid.
HAZARDOUS POLYMERIZATION:	() may occur (x) will not occur
CONDITIONS TO AVOID:	None

6. PHYSICAL PROPERTIES

APPEARANCE AND ODOR:	Clear Amber Liquid Mild
BOILING POINT:	NA
SPECIFIC GRAVITY:	1.018
VAPOR DENSITY:	(X) heavier () lighter than air
% VOLATILE (BY VOL):	< 1%
EVAPORATION RATE:	() faster (X) slower than ether
SOLUBILITY IN WATER:	Soluble

7. FIRE AND EXPLOSION HAZARD INFORMATION

DOT CATEGORY:	Flammable liquid (regulated by 49 CFR 173.120)
FLASHPOINT:	115 °F
OSHA CATEGORY:	N/A
EXTINGUISHING MEDIA:	Use National fire protection association Class B extinguishers (Carbon dioxide, water fog, dry chemical or foam). Water may also be used.
SPECIAL FIRE FIGHTING PROCEDURES:	Cool fire exposed containers with water. Wear NIOSH/OSHA approved self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
UNUSUAL FIRE HAZARD:	None known

8. SPECIAL PRECAUTIONS

HANDLING AND STORAGE:	Keep container tightly closed. Keep away from heat, sparks and flame. Do not use with aluminum equipment at temperatures above 49 °C (120 °F).
OTHER PRECAUTIONS:	Do not take internally. Prevent contact with contaminated clothing. Wash contaminated clothing before reuse.

9. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION:	Not required under normal operating conditions.
VENTILATION:	Where employees may be exposed, provide general dilution or local exhaust ventilation in volume and pattern to keep level of hazardous ingredient in Section 2 below recommended (ACGIH TLV) or regulate C (OSHA PEL) limit. Where employees will not be exposed, keep level below 25% of LEL in Sect. 2.
PROTECTIVE GLOVES:	Wear chemically resistant gloves.
EYE PROTECTION:	Safety glasses with slide shields or goggles.
OTHER PROTECTIVE EQUIP.:	Avoid skin contact by use of other protective clothing. A safety shower, an eyebath and washing facilities should be available.

10. SPILL OR LEAK PROCEDURES

ENVIRONMENTAL RELEASES: Certain releases of any substance to the environment are prohibited by law and may require reporting to an environmental agency. Remove all sources of ignition. Wear personal protective equipment to avoid breathing vapors. Use non-sparking tools. For small spills, dike and absorb with inert material. Use emergency response professionals if managing a release is beyond the capability of in-house personnel.

WASTE DISPOSAL: This material is not classified as an ignitable hazardous waste according to federal regulations. Check with your state environmental agency to determine if this material is regulated in any way. No disposal method should be used which would pose an environmental or human health threat including any which would contaminate ground or surface waters.

The recommendation for safe handling and protection procedures is believed to be generally suitable for the standard uses of this compound. However, each user should identify his intended uses of this material and determine whether they are appropriate. All data included in this document is released as typical values and should not be utilized to determine the suitability of this material for a particular use or purpose. No warranty, either expressed or implied, is hereby made, nor do we give permission, inducement, or recommendations to practice any patented invention without a license. All data is offered for consideration, investigation and verification purposes only.

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